

CLAIMS

1. A mobile communication device comprising:
 - a service-type recording section for recording a service type of communication to be handled;
 - an interface recording section for recording a type of an external interface with an external network received from a mobile router relaying to the external network;
 - an interface decision section for selecting at least one or more of external interfaces adapted for the service type; and
 - a transmission section for notifying first information of the external interface selected to a mobile router of within a same segment.
2. A mobile communication device according to claim 1, further comprising a priority decision section for deciding a priority of the external interface selected,
wherein the transmission section generates second information added the first information with the priority and notifies the second information.
3. A mobile communication device according to claim 1, wherein selecting a group of the external interfaces is from a plurality of external interfaces of within the mobile router.
4. A mobile communication device according to claim 2, wherein selecting a group of the external interfaces is from a plurality of external interfaces of within the mobile router.
5. A mobile communication device according to claim 2, wherein the interface recording section further records link status information of the external interface received, and the transmission section adds the second information with the link status information thereby makes a notification.

6. A mobile communication device according to claim 1, wherein the service-type recording section records a significance of a parameter representative of a characteristic of the service type, and the interface decision section decides an external interface on the basis of the significance.

7. A mobile communication device according to claim 6, having a function for a user to change at least one of the service type and the significance.

8. A mobile communication device according to claim 6, wherein the service-type recording section has a function to record the significance by downloading from the external network.

9. A mobile communication device according to claim 6, wherein the interface decision section takes a same parameter as the parameter of service type as a parameter representative of a characteristic of the external interface, the parameters of the external interfaces each having further information recording superiority, the external interface being determined on a basis of the significance and the superiority.

10. A mobile communication device according to claim 9, wherein the service-type recording section has a function for a user to change at least one of the service type, the significance and the superiority.

11. A mobile communication device according to claim 9, wherein the service-type recording section has a function to record at least any one of the significance and the superiority by downloading from the external network.

12. A mobile communication device according to claim 1,

further having a collection timer managing section for managing a period to receive the external interface type from the mobile router,

wherein the interface decision section selectsg an external interface after receiving a notification of elapse of a predetermined time from the collection timer managing section.

13. A mobile router comprising:

an interface-type recording section for recording external-interface-type information as interface information for connection with an external network;

a connection-interface recording section for receiving and recording connection information for deciding an external interface for relaying with the external network, from a mobile communication device received the external-interface type information;

a connection decision section for deciding whether or not to relay communication of from the mobile communication device, on the basis of the connection information; and

a router transmission section for multicasting the external-interface-type information and making a notification to the mobile communication device selected for decision of relaying.

14. A mobile router according to claim 13, wherein the connection information has a plurality of external interface types, the connection decision section selecting one external interface from the external interface types.

15. A mobile router according to claim 14, wherein the connection information is further added with a priority on each of the external interface types, and

the connection decision section selects the external interface according to the priority.

16. A mobile router according to claim 15, further comprising a timer managing section for managing a time of up to a notification to relay by the connection decision section to the mobile communication device,

wherein the connection decision section makes a notification after a lapse of the time set shorter as the priority is higher.

17. A mobile router according to claim 15, wherein the connection decision section allows for relaying in a case the external interface is in a connectable status and the priority is the highest.

18. A mobile router according to claim 15, further comprising an external-link monitor section for notifying a change of link status to the mobile communication device and another mobile router through the router transmission section in a case the external interface is changed in link status.

19. A mobile router according to claim 18,
wherein the connection interface recording section updates information of connection status on a basis of a notification of link status change received from the other mobile router, and
the connection decision section allows for relaying in a case the external interface is in a connectable status and the priority is the highest from the updated information of connection status.

20. A mobile communication system comprising
a mobile communication device including:
a service-type recording section for recording a service

type of communication to be handled;

an interface recording section for recording a type of an external interface to an external network received from a mobile router relaying to the external network;

an interface decision section for selecting at least one or more external interfaces adapted for the service type;

a transmission section for notifying first information of the external interface selected to the mobile router of within a same segment; and

a mobile router including:

an interface-type recording section for recording external-interface-type information as interface information for connection with an external network;

a connection-interface recording section for receiving and recording connection information for deciding an external interface for relaying with the external network, from a mobile communication device received the external-interface-type information;

a connection decision section for deciding whether or not to relay communication of from the mobile communication device, on the basis of the connection information; and

a router transmission section for multicasting the external-interface-type information and making a notification to the mobile communication device selected for decision of relaying.

21. A mobile communication system according to claim 20, wherein the mobile router that the connection information is further added with a plurality of external interface types and a priority on each of the external interfaces, and the connection

decision section is to select the external interface according to the priority, further comprises an external-link monitor section for notifying a change of link status to the mobile communication device and another mobile router through the router transmission section in a case the external interface is changed in link status; and

the mobile communication device further comprises a priority decision section for deciding a priority of the external interface selected, the interface recording section recording link status information of the external interface further received, the transmission section adding the first information with the priority and the link status information thereby making a notification to the mobile router.